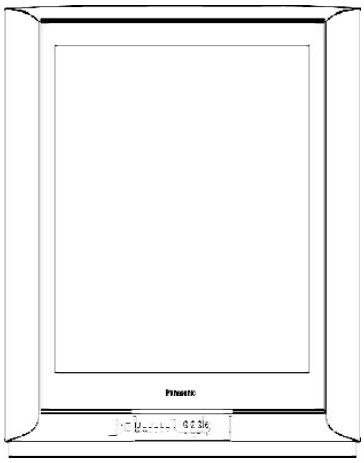
ORDER NO. MTV0601411CE

Service Manual

Colour Television

TX-21FX50M-SINGAPORE

GP41 Chassis



SPECIFICATIONS

Specifications

Power Source :	AC AUTO 110-240V, 50/60 Hz		
Power Consumption :	67W	Audio Terminal :	AV 1, 2, YUV, MONITOR OUT
Aerial Impedance :	75 unbalanced Coaxial type	RAV In	Video In 1 Vp-p 75 Audio In Approx. 400mVrms
Receiving System :	17 Systems	Monitor Out	Video Out 1 Vp-p 75 Audio Out Approx. 400mVrms
Receiving Channels :			
VHF	2-12 PAL / SECAM B,K1 0-12 PAL B (N ZEALAND) 1-9 PAL B (N ZEALAND) 1-12 PAL / SECAM D 1-12 NTSC M (JAPAN) 2-13 NTSC M (U.S.A)	High Voltage :	27.5kV ±1.5 at zero beam current
		Picture Tube :	A51LYZ295X 50.5cm (21 inches) Measured diagonally, 90° deflection
UHF	21-69 PAL G,H,I / SECAM G.K.KI 28-69 PAL B (Australia) 13-57 PAL D,K 13-62 NTSC M (JAPAN) 14-69 NTSC M (U.S.A)	Audio Output :	16.0W
		Dimensions :	Height : 472 mm Width : 648 mm Depth : 488 mm
CATV	S1-S20 (OSCAR) 1-125 (U.S.A CATV) C13-C49 (JAPAN) 21-237 (CHINA) 5A,9A (AUSTRALIA)	Mass :	24 kg (Net Wt.)
		Specifications are subject to change without notice. / Mass and dimensions shown are approximate.	

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

1. Safety Precautions

1.1. General Guide Lines

1. It is advisable to insert an isolation transformer in the AC supply before servicing this hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC cord outlet.
5. Potential, as high as 29.0kV is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Leakage Current Cold Check

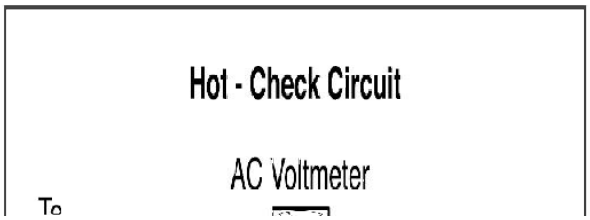
1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch. / Measure the resistance value, with an ohmmeter, between the jumper AC plug and each exposed

metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 4 M and 20 M Ω. When the exposed metal does not have a return path to the chassis, the reading must be infinite.

1.3. Leakage Current Hot Check (Fig. 1)

1. **Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.**
2. **Check a 2 k Ω non-inductive resistor and an AC/DC current meter, in series with each exposed metallic part on the receiver in turn and an earth such as a water pipe.**
   The current from any point should not exceed 0.7 mA peak AC or 2 mA DC. In the case of a measurement being outside of these limits specified, there is a possibility of a shock hazard and the receiver should be repaired and rechecked before it is returned to the customer.

Fig. 1



1.4. X-Radiation

Warning:
The potential sources of X-Radiation in TV set are the EHT section and the picture tube. When using a picture tube test jig for service, ensure that jig is capable of handling 29.0kV without causing X-Radiation.
Note: It is important to use an accurate periodically calibrated high voltage meter.

1. **Set the brightness to minimum.**
2. **Use the remocon to get into Service Mode.**
3. **Measure the EHT. The meter reading should indicate 27.5±1.5kV. If the meter indication is out of tolerance, immediate service and correction**

is required to prevent the possibility of premature component failure.

4. To prevent the possibility X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

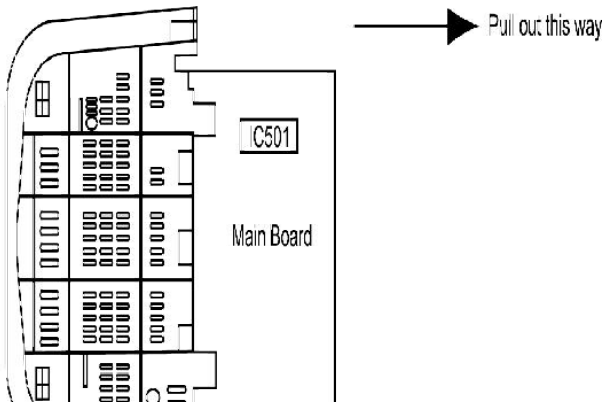
1.5. GP41 Chassis Block Diagram

2. Service Hints

2.1. Service Position for E-Board

1. Remove the back cover.
2. Stand the TV set as shown in Fig. 2.
3. Remove the A-Board from the TV set by pulling the main board out as shown in Figure 2.

Fig. 2



2.2. Factory Mode Adjustment

1. Factory Mode Adjustment.
   a) Set timer ON

   b) Press remote's RECALL ( ) and panel's volume down key simultaneously to enter SERVICE 1.
2. To Set Self-Check:
   Press the volume down button on TV then press the Off Timer Button on remote control.
3. Service Mode 1 Controls

Key 3/4	Previous/Next Service 1 Item
Key 8/9	Adjust user Brightness(-/+)
Program up/down	Program position up/down
Volume +	Increment of selected item
Volume –	Decrement of selected item
OK	Store/Save selected item
Normalize	Exit service mode

4. Service Mode 1 Function

No.	Alignment	Range
1	H-POS	-128~127
2	V-POS	-128~127
3	V-AMP	-128~127
4	DVCO	-
5	R-CUT OFF	0~511
6	G-CUT OFF	242
7	B-CUT OFF	0~511
8	R-DRIVE	0~511
9	G-DRIVE	N / A

5. Service Mode 2 Controls

To enter SERVICE 2; press channel key ‘1’ in SERVICE 1 entry screen.

NOTE :- Service mode 2 options bit.

6. Service Mode 3 Controls

To enter SERVICE 3; press channel key ‘1’ in SERVICE 2 entry screen.

Key 3/4	Previous/Next Service 1 Item
Program up/down	Program position up/down
Volume +	Increment of selected item
Volume –	Decrement of selected item
OK	Store/Save selected item
Normalize	Exit service mode

7. Service Mode 3 Function

No.	Alignment	Range
1	H-POS 60Hz Offs	-128~127
2	V-POS 60Hz Offs	-128~127
3	V-AMP 60Hz Offs	-128~127
4	V-LIN	-128~127
5	V-SYM	-128~127
6	ANGLE	-128~127
7	BOW	-128~127
8	V-ZOOM	0~511

2.3. Adjustment for White Balance

Preparation:

1. **Receive the white balance pattern and aging should have been performed over 30 minutes.**
2. **Set the picture menu to DYNAMIC NORMAL.**
3. **Degausse the CRT face.**
4. **Fix the CRT colour analyzer receiver unit to CRT face.**

Adjustment of Low Light.

1. **Adjustment Sub Bright, so that Y = 6.5 ± 1.0 nit.**
2. **Adjustment R-CUT OFF, so that X = 0.245 ± 0.015 nit.**
3. **Adjustment G-CUT OFF, so that Y = 0.274 ± 0.015 nit.**

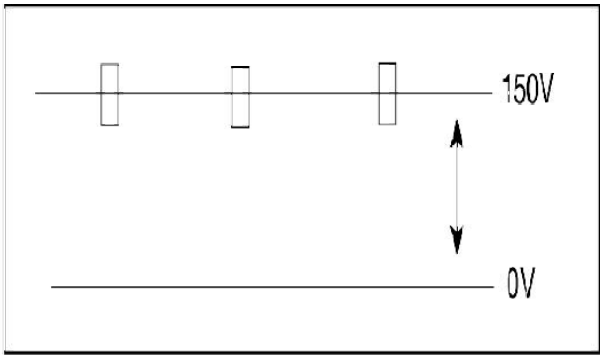
Adjustment of High Light

1. **Adjustment Sub Bright, so that Y = 150 nit.**
2. **Adjustment R-Drive, so that X = 0.261 ± 0.015 nit.**
3. **Adjustment B-Drive, so that Y = 0.274 ± 0.015 nit.**

2.4. Adjustment for CRT CUT OFF

Preparation:

1. Connect the oscilloscope probe to TPL5.
2. Screen VR min.
3. Set the data Sub Bright, Bright.
4. In service Mode at “Bright” dac press [5] in factory mode to enter vertical line and adjust by volume down or up button.
5. Adjust “Screen VR” until 1-H Line appears.



2.5. Adjustment Procedure

2.5.1. +B Voltage

Item / preparation

1. Operate the TV set.
2. Set control as follows :
   Brightness ..... minimum
   Contrast ..... minimum

Adjustment procedure

1. Confirm the DC voltage at the indicated test points, as follows :
   TPA 15 : 3.35 ± 0.2V
   TPA 16 : 141 ± 2V
   TPA 17 : 8.2 ± 0.5V
   TPA 18 : 1.9 ± 0.2V
   TPA 19 : 5.2 ± 0.2V
   TPA 20 : 175 ± 15V

2.5.2. High Voltage

Item / preparation

1. Receive the crosshatch pattern.
2. Set to 0 Beam.
   Screen VR ..... minimum
   Contrast ..... minimum

Adjustment procedure

1. Connect a DC voltage meter to TPA 16 and confirm the +B voltage is 141.0 ± 2V.
2. Connect a high frequency voltmeter to heater and confirm that voltage reads 6.3 ± 0.24 (VRMS).
3. Normalize the brightness and contrast.

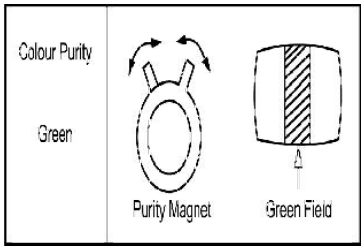
2.6. Adjustment

Before Colour Purity, Convergence and White Balance adjustment are attempted, V. Height, H. Centre and Focus adjustments must be completed.

Colour Purity

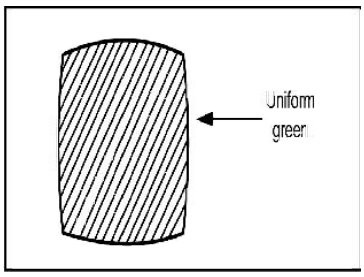
1. Set the Brightness and Contrast controls to their maximum positions.
2. Operate the TV set for 60 minutes.
3. Fully degausse the picture tube by using an external degaussing coil.
4. Apply a crosshatch pattern signal and adjust the static convergence magnets to the approximately correct position.
5. Receive a black and white signal.
6. Set the control as follows: / Red.....minimum / Green.....minimum / Blue.....minimum / Press the Shipping button on the remote control twice to select CRT Adjustment Mode to select low light.
7. Loosen the clamp screw for the Deflection Yoke A in Fig. 10 and move the Deflection Yoke as close to the purity magnet as possible.
8. Adjust the purity magnetic rings so that a vertical green field is obtained at the centre of the screen.

Fig. 6



9. Slowly push the Deflection Yoke and set it where a uniform green field is obtained.

Fig. 21



10. Re-adjust the Low Light controls to their correct settings and make sure that a uniform white field is obtained.

11. Tighten the clamp screw A in Fig. 10.

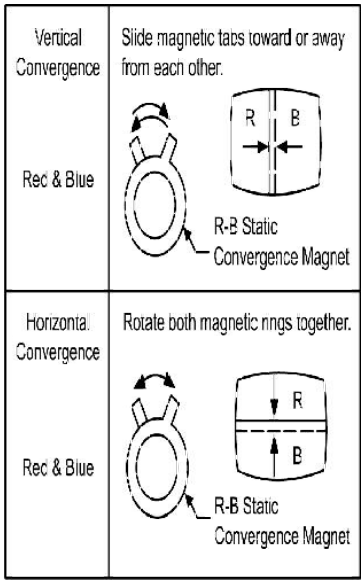
Convergence

1. Apply a crosshatch pattern signal and Normalize Contrast control to the maximum positions.

2. Adjust Brightness until the grey position of the crosshatch pattern just becomes black.

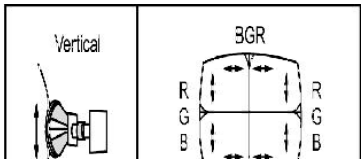
3. Adjust the Red and Blue line at the centre of the screen by rotating the R-B static.

Fig. 8



4. **Adjust Red and Blue with Green line at centre of the screen by rotating (RB)-G static convergence magnetic rings.**
5. **Lock convergence magnets with silicone sealer.**
6. **Remove the DY wedges and slightly tilt the Deflection Yoke vertically and horizontally to obtain the good overall convergence.**

Fig. 9



7. **Fix the Deflection Yoke by reinserting the DY wedges. Refer to Fig. 10.**
8. **If purity error is found, repeat "Colour Purity" adjustment.**

Adjustment of CRT VRS

1. **Preparation**
   - **A. Set DY to CRT not to tilt up and down left and right deflection.**
   - **B. Set CY to CRT and set CY magnet primarily (Fig. 1)**
     Purity magnet : Set purity magnet that 2 magnets are (TOP POSITION)
     VRS magnet : Set purity magnet 2 magnets are (HORIZONTAL POSITION)

2. Adjustment

A. Receive that Cross Hatch pattern.

B. Adjust V-SHIFT -50Hz.

C. Set 2 magnets of horizontal position to up and down equally so that it will be the center part of CRT. (Fig. 2)

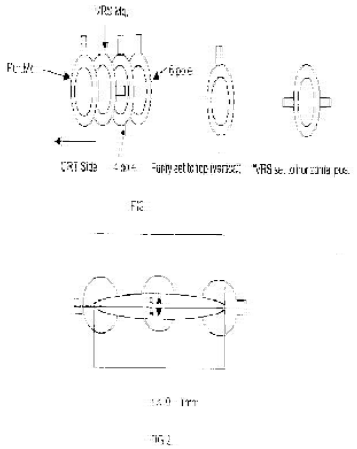


Fig. 10

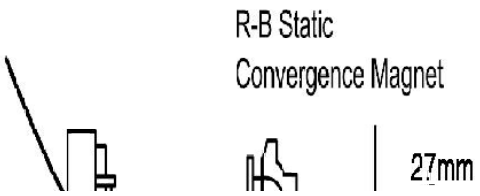
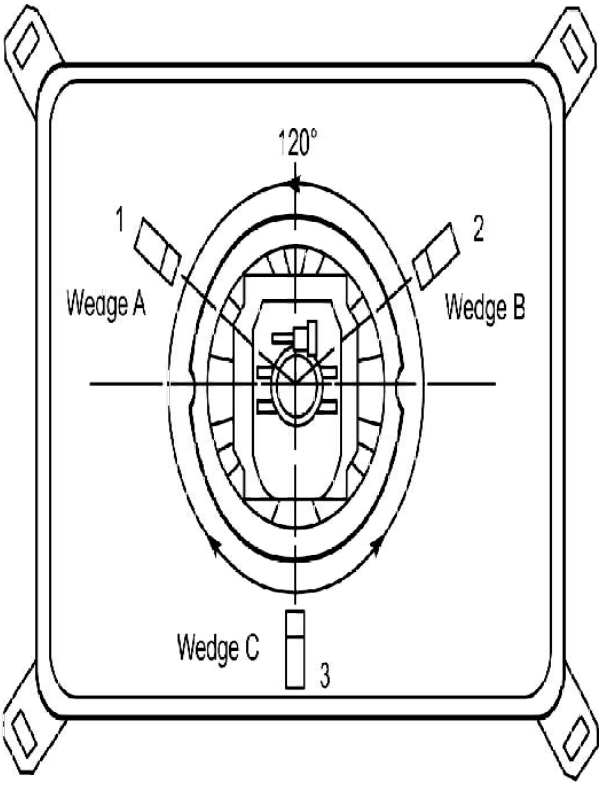


Fig. 11



Notes:

1. **Wedge A, B and C should be inserted following the sequence of 1, 2 and 3 shown in Fig. 11.**
2. **The wedges should be set 120° apart from each other.**
3. **Be certain that three wedges are firmly fixed and the Deflection Yoke is tightly clamped in place. / Otherwise the Deflection Yoke may shift its position and cause a loss of convergence and purity.**

3. Conductor Views

4. Schematic Diagram

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Notes :

1. Resistor

   All resistors are carbon 1/4W resistors unless marked as follows :

   Unit of resistance is OHM (Ω) (K = 1 000 M = 1 000 000)

◯	Nonflammable	⊠	Metal Oxide
△	Solid	◯	Metal Film
⊿	Wire Wound	⊗	Fuse

2. Capacitor

   All capacitors are ceramic 50V capacitors unless marked as follows

   Unit of capacitance is uF unless otherwise noted.

⊗	Temperature Compensation	⧘	Electrolytic
Ⓜ	Polyester	⧘	Bipolar
ⓜ	Metalized Polyester	Ⓣ	Dipped Tantalum
⊠	Polypropylene	Ⓩ	Z-Type

6. Voltage Measurement

   Voltage is measured using DC voltmeter.

   Conditions of the measurement are the following :

   Power Source..... AC AUTO 110-240V, 50/60Hz

   Receiving Signal.....Colour Bar signal (RF)

   All customer's controls.....Maximum positions

7. Number in red circle indicates waveform number.

   (See waveform pattern table.)

8. When arrow mark ( ) is found, connection is easily found from the direction of arrow.

9. → : Indicates the major signal flow.

10. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks :

The Power Circuit contains a circuit area which uses a seperate power supply to isolate the earth connection.

The circuit is defined by HOT and COLD indications in the schematic diagram.

Take the following precautions :

All circuits, except the Power Circuit are cold.

Precautions :

a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.

b. Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.

c. Do not connect an instrument such as an oscilloscope to the hot and cold circuits simultaneously or a fuse may be blown.
   Connect the earth of instruments to the earth connection of the circuit being measured.

d. Make sure to disconnect the power plug before removing the chassis.

4.1. A Board

4.1.1. A Board (1/5)

4.1.2. A Board (2/5)

4.1.3. A Board (3/5)

4.1.4. A Board (4/5)

4.1.5. A Board (5/5)

4.2. L Board

4.2.1. L Board (1/3)

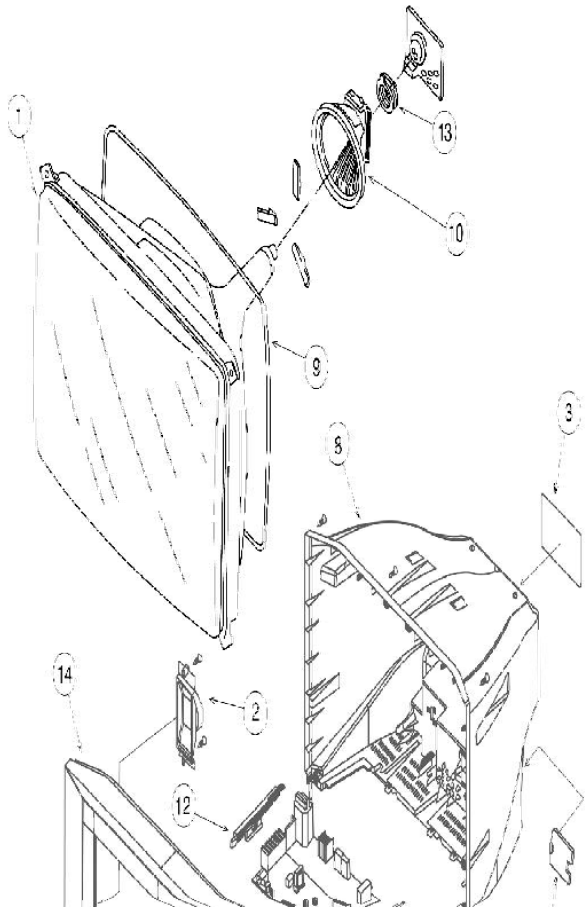
4.2.2. L Board (2/3)

4.2.3. L Board (3/3)

5. Parts Locations

PARTS LOCATION

Note: The number on mechanical parts indicates Ref. No. of Replacement Parts List.



6. Replacement Parts List

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use manufacturer's specified parts.

Note: Printed circuit board assembly with "N.A" is no longer available after production discontinuation of the complete se..

Abbreviation of part name and description

1. Resistor

Example:
ERD25TJ104 C 100KΩ, J, 1/4W
Type Allowance

Type	Allowance
C: Carbon	F: ± 1%
F: Fuse	G: ± 2%
M: Metal Oxide Metal Film	J: ± 5% K: ± 10%
S: Solid	M: ± 20%
W: Wire Wound	

2. Capacitor

Example:
ECKF1H103ZF C 0.01μF, Z, 50V
Type Allowance

Type	Allowance
C: Carbon	C: ± 0.25pF
E: Electrolytic	D: ± 0.5pF
P: Polyester Polypropylene	F: ± 1pF G: ± 3%
T: Tantalum	J: ± 5%
	K: ± 10%
	L: ± 15%
	M: ± 20%
	P: + 100%, -0%
	Z: + 80%, -20%

6.1. Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
1	A51LYZ295X	PICTURE TUBE	
2	EAS15S17A	SPEAKER	
	N2QAJB000161	REMOTE CONTROL	
3	TBM4G1292	MODEL NAME PLATE	
4	TBM4G3017	PANASONIC BADGE	
5	TBX4G91101	POWER BUTTON	
	TES4G206	COIL SPRING	
	TES4G214	SPRING (POWER BUTTON)	
	TES4G409-1	SPRING (DOOR)	
	THT4G10139	SCREW	
	THT4G1014J	SCREW	
6	TKP4G11744	AC CORD BRACKET	
7	TKP4G13471	DOOR	
8	TKU4GA1351	BACK COVER	
9	TLK4G9096X	DEGAUSSING COIL	
10	TLY4G348T	DEFLECTION YOKE	
	TMM4G503	RUBBER WEDGE	
	TMM4G516	RUBBER WASHER	
11	TMZ4G9818-1	CHASSIS RAIL (L)	
12	TMZ4G9824	CHASSIS RAIL (R)	
NLA	TNP4G380AA	A BOARD	
NLA	TNP4G382AA	L BOARD	

Ref. No.	Part No.	Part Name & Description	Remarks
13	TP-5400PW	CONVERGENCE YOKE	
	TPD4G1171-1	CUSHION (TOP)	
	TPE4G14036	SET COVER	
	TQB4G3985	FAN BAG	
	TSMA011	MAGNET	
	TSN63115-4	PURITY MAGNET	
	TSX4G166L-1	AC POWER CORD	
14	TXFKY02DS02	CABINET ASSY	
	TXFPC01DS02	CARTON	
	TXFPD04DS02	CUSHION (BOTTOM)	
	CAPACITORS		
C002	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C003	ECJ2VC1H560J	C 56PF, J, 50V	
C004	ECJ2VC1H560J	C 56PF, J, 50V	
C006	F2A1C101A310	E 100UF, 16V	
C1001	ECJ2FB0J225K	C 2.2UF, J, 6.3V	
C1103	F1J1H103A590	C 0.01UF, J, 50V	
C1131	F1J1H103A590	C 0.01UF, J, 50V	
C1142	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C2113	F2A1H3R3A317	E 3.3UF, 50V	
C2117	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C2129	F2A1C102A159	E 1000UF, 16V	
C2303	F2A1H4R7A317	E 4.7UF, 50V	
C2314	F2A1E470A270	E 47UF, 25V	
C2315	ECA1EM471B	E 470UF, 25V	
C2321	F1J1H102A018	E 1000UF, 50V	
C2322	F1J1H102A018	E 1000UF, 50V	
C2325	F2A1C470A310	E 47UF, 16V	
C2326	F2A1C470A310	E 47UF, 16V	
C2328	F1J1E474A101	C 0.47UF, 25V	
C2329	F1J1E474A101	C 0.47UF, 25V	
C253	ECEA1HN2R2U	E 2.2UF, 50V	
C254	F1J1H102A018	E 1000UF, 50V	
C257	ECEA1HN2R2U	E 2.2UF, 50V	
C258	F1J1H102A018	E 1000UF, 50V	
C301	ECJ2VB1C104K	C 0.1UF, K, 16V	
C302	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3023	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3024	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3025	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3027	ECJ2VF1C105Z	C 1UF, Z, 16V	
C303	ECJ2VB1C104K	C 0.1UF, K, 16V	
C3034	ECA1AM471B	E 470UF, 10V	
C305	F2A1C4710045	E 470UF, 16V	
C306	F1J1H222A590	C 2200PF, 50V	
C307	F1J1H222A590	C 2200PF, 50V	
C308	F1J1H222A590	C 2200PF, 50V	
C3176	ECA1CM101B	E 100UF, 16V	
C3177	ECA1CM101B	E 100UF, 16V	
C3178	ECJ2VC1H561J	C 560PF, J, 50V	
C3179	ECJ2VC1H561J	C 560PF, J, 50V	
C3184	ECJ2VF1C105Z	C 1UF, Z, 16V	
C3185	ECJ2VF1C105Z	C 1UF, Z, 16V	
C350	ECA1CM101B	E 100UF, 16V	
C360	ECKW3D102KBP	C 1000PF, K, 2KV	
C363	F2A1C4710045	E 470UF, 16V	

Ref. No.	Part No.	Part Name & Description	Remarks
C366	F2A1C101A310	E 100UF, 16V	
C368	ECA2EM100B	E 10UF, 250V	
C370	F1J1H272A021	C 2700PF, 50V	
C371	F1J1H272A021	C 2700PF, 50V	
C372	F1J1H272A021	C 2700PF, 50V	
C373	ECJ2VC1H471J	C 470PF, J, 50V	
C374	ECJ2VC1H471J	C 470PF, J, 50V	
C376	ECJ2VC1H471J	C 470PF, J, 50V	
C401	ECJ2VC1H560J	C 56PF, J, 50V	
C404	ECQB1333JF	P 0.033UF, J, 100V	
C406	F2A1H221A247	E 220UF, 50V	
C407	ECJ2VC1H560J	C 56PF, J, 50V	
C408	ECQB1154JF	P 0.15UF, J, 100V	
C454	ECQV1H154JM	P 0.15UF, J, 50V	
C502	ECKR3A821KBP	C 820PF, K, 1KV	
C504	F1J1H681A590	C 680PF, 50V	
C507	ECJ2VF1C105Z	C 1UF, Z, 16V	
C511	ECA1VM101B	E 100UF, 35V	
C514	F2A1E102A225	E 1000UF, 25V	
C516	F2A1E102A225	E 1000UF, 25V	
C519	F2A2C1010015	E 100UF, 160V	
C520	F2A0J221A317	E 220UF, 6.3V	
C550	ECQM4223JZ	P 0.022UF, J,400V	
C552	ECA2EM100B	E 10UF, 250V	
C554	F0C2E184A039	P 0.18UF, 250V	
C559	F0C3C752A002	P 7500PF, 1.6kV	
C560	ECQM4393JZ	P 0.039UF, J,400V	
C561	ECKW3D271JBR	C 270PF, 2kV	
C565	ECQB1H273JF	P 0.027UF, J, 50V	
C567	ECQM4473JZ	P 0.047UF, J,400V	
C568	F0C3D102A003	P 1000PF, 2kV	
C601	F1J1H183A021	C 0.018UF, 50V	
C602	F1J1H222A590	C 2200PF, 50V	
C604	F2A1C101A310	E 100UF, 16V	
C606	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C607	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C611	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C613	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C614	ECJ2VC1H100C	C 10PF, C, 50V	
C615	ECJ2VC1H100C	C 10PF, C, 50V	
C616	F2A1C101A310	E 100UF, 16V	
C618	F2A1C101A310	E 100UF, 16V	
C619	F2A1C101A310	E 100UF, 16V	
C620	ECJ2VB1H333K	C 0.033UF, K, 50V	
C622	F2A1C101A310	E 100UF, 16V	
C623	F2A1C101A310	E 100UF, 16V	
C626	F2A1C101A310	E 100UF, 16V	
C627	F2A1C101A310	E 100UF, 16V	
C628	F2A1A471A274	E 470UF, 10V	
C630	ECJ2VF1H103Z	C 0.01UF, Z, 50V	
C631	ECJ2VB1H333K	C 0.033UF, K, 50V	
C632	F2A1H4R7A317	E 4.7UF, 50V	
C633	ECJ2VC1H471J	C 470PF, J, 50V	
C634	ECJ2VC1H471J	C 470PF, J, 50V	
C635	F2A1C101A310	E 100UF, 16V	
C639	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C640	ECJ2VF1H104Z	C 0.1UF, Z, 50V	

Ref. No.	Part No.	Part Name & Description	Remarks
C642	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C645	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C646	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C650	ECA1CM331B	E 330UF, 16V	
C652	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C654	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C655	ECJ2VF1H104Z	C 0.1UF, Z, 50V	
C656	ECJ2VC1H270J	C 27PF, J, 50V	
C657	ECJ2VC1H560J	C 56PF, J, 50V	
C662	F2A0J101A317	E 4.7UF, 50V	
C812	F1A2E152A001	C 1500PF	
C813	ECKCNA472ME7	C 4700PF, M,	
C815	F1A2E152A001	C 1500PF	
C816	B81130C1224M	P 0.22UF, 275V	
C817	B81130C1224M	P 0.22UF, 275V	
C818	F2A1H1R00053	C 0.22UF	
C821	ECKW3D561KBP	C 560PF, K, 2KV	
C826	ECQB1H103JF	P 0.01UF, 50V	
C827	ECQB1H473JF	P 0.047UF, J, 50V	
C830	ECQB1H821KF	P 820PF, 50V	
C840	ECKCNA102MB7	C 1000PF, M,	
C841	ECKW3D151KBR	C 150PF, K, 2KV	
C842	F2A1H1000084	E 10UF, 50V	
C843	F2A1E102A223	E 1000UF, 25V	
C848	ECQB1H471JF	P 470PF, J, 50V	
C849	F1B2H471A025	C 470PF, J, 500V	
C851	ECQB1H103JF	P 0.01UF, 50V	
C854	ECKWAE472ZED	C 4700PF, Z,500V	
C855	ECKWAE472ZED	C 4700PF, Z,500V	
C856	F2B2G2710010	E 270UF, 400V	
C857	ECQM4473JZ	P 0.047UF, J,400V	
C858	ECQE2A473JF	P 0.047UF, J,250V	
C859	ECKW3D821KBP	C 820PF, K, 2KV	
C865	ECKW3D331JBP	C 330PF, J, 2KV	
C867	F2A2C2210013	E 220UF, 160V	
C869	F1J1E563A003	C 0.056UF, 25V	
C870	F2A1C332A260	E 3300UF, 16V	
C871	F1B2H471A025	C 470PF, 500V	
C872	F2A1C222A117	E 2200UF, 16V	
C873	L6Y5P4B122K	C 1200PF, K,500V	
C875	F1J1H332A021	C 3300PF, 50V	
C877	F2A1C1000079	E 10UF, 16V	
C879	F2A0J331A260	E 330UF, 6.3V	
C882	F2A1C101A310	E 100UF, 16V	
C884	F2A1C102A159	E 1000UF, 16V	
C886	F2A1H330A342	E 33UF, 50V	
C887	F2A1C102A159	E 1000UF, 16V	
C891	F2A1C101A310	E 100UF, 16V	
C893	ECA1CM221B	E 220UF, 16V	
C897	F1J1H332A021	C 3300PF, 50V	
C898	ECJ2VF1C105Z	C 1UF, Z, 16V	
	DIODES		
D1010	B3AGA0000089	DIODE	
D1132	B0BA3R800012	DIODE	
D2103	B0AACK000004	DIODE	
D2107	B0AACK000004	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D2108	B0AACK000004	DIODE	
D361	B0AACK000004	DIODE	
D362	B0AACK000004	DIODE	
D363	B0AACK000004	DIODE	
D364	B0AACK000004	DIODE	
D365	B0AACK000004	DIODE	
D366	B0AACK000004	DIODE	
D367	B0AACK000004	DIODE	
D402	B0HAJL000003	DIODE	
D503	B0AACK000004	DIODE	
D504	B0AACK000004	DIODE	
D507	B0ACMJ000001	DIODE	
D511	MA4108J	DIODE	
D512	B0HAJL000003	DIODE	
D513	B0HAMP000090	DIODE	
D515	B0HAMP000090	DIODE	
D520	B0ACDJ000009	DIODE	
D552	B0HAMP000090	DIODE	
D556	ERB06-15	DIODE	
D557	B0HAMR000095	DIODE	
D558	MA185	DIODE	
D601	B0ADDJ000025	DIODE	
D610	MAZ80560HL	DIODE	
D830	B0HAJL000001	DIODE	
D831	MTZJ33B	ZENER DIODE	
D836	D4EAC6210002	VARISTOR	
D846	B0BA8R000010	DIODE	
D847	B0BA8R000010	DIODE	
D848	FMLG12S	DIODE	
D851	B0EAKT000018	DIODE	
D852	B0HAJL000003	DIODE	
D853	B0AACK000004	DIODE	
D854	B0AACK000004	DIODE	
D855	B0BA6R800023	DIODE	
D860	B0EBNT000007	DIODE	
D861	B0BA8R000011	DIODE	
D862	MTZJ2.0B	ZENER DIODE	
D863	B0HAJL000003	DIODE	
D865	B0BA3R500008	DIODE	
D866	B0HAPV000009	DIODE	
D867	B0AACK000004	DIODE	
D872	B0HAMM000108	DIODE	
D873	B0AACK000004	DIODE	
D876	B0AACK000004	DIODE	
D881	B0BA01500052	DIODE	
D882	B0BA01500052	DIODE	
D883	B0JAPK000013	DIODE	
D884	B0AACK000004	DIODE	
D887	B0AACK000004	DIODE	
	INTEDGRATED CIRCUITS		
IC1101	TVR4GAS453	EEPROM IC	
IC2301	C0ZAZ0000164	IC	
IC451	AN15525A	IC	
IC601	TVR4G18-3	FLASH MEMORY IC	
IC605	C0ZAZ0000162	IC	
IC801	C5HABZZ00116	IC, POWER SUPPLY	

Ref. No.	Part No.	Part Name & Description	Remarks
IC802	C0EAS0000026	IC	
IC851	C0DAEJG00001	IC, POWER SUPPLY	
IC857	C0DBEHE00005	IC, POWER SUPPLY	
IC860	B3PAA0000363	PHOTO COUPLER	
IC871	C0DAEJG00001	IC, POWER SUPPLY	
IC875	C0DBEHE00005	IC, POWER SUPPLY	
	COILS		
L002	G0C100K00008	COIL	
L003	G0C4R7JA0055	PEAKING COIL	
L2302	J0JKA0000038	BEAD CORE	
L2304	J0JKA0000038	BEAD CORE	
L2306	J0JKA0000024	EMI FILTER	
L2323	J0JKA0000038	BEAD CORE	
L2324	J0JKA0000038	BEAD CORE	
L376	J0JKA0000024	EMI FILTER	
L412	J0JKA0000024	EMI FILTER	
L505	J0JKA0000024	EMI FILTER	
L514	J0JKA0000038	BEAD CORE	
L515	J0JKA0000038	BEAD CORE	
L550	J0JKB0000034	EMI FILTER	
L557	G0D820000005	LINEARITY COIL	
L601	G0C100K00008	COIL	
L602	G0C100K00008	COIL	
L603	G0C100K00008	COIL	
L604	G0C100K00008	COIL	
L605	TALV35VB8R2K	PEAKING COIL	
L606	G0C100K00008	COIL	
L607	TALV35VB8R2K	PEAKING COIL	
L608	G0C3R9KA0030	PEAKING COIL	
L609	J0JKB0000034	EMI FILTER	
L611	G0C100K00008	COIL	
L625	J0JKA0000038	BEAD CORE	
L630	TSK1032	BEAD CORE	
L635	TSK1032	BEAD CORE	
L657	EXC3BB221H	CHIP BEAD CORE	
L842	J0JKA0000025	BEAD CORE	
L843	J0JKA0000038	BEAD CORE	
L845	J0JKA0000023	BEAD CORE	
L865	J0JKA0000025	BEAD CORE	
L866	J0JKA0000023	BEAD CORE	
L867	J0JKB0000039	EMI FILTER	
L869	J0JKA0000038	BEAD CORE	
L894	G0A220GA0002	CHOKE COIL	
	TRANSISTORS		
Q1001	B1ADDF000005	TRANSISTOR	
Q1002	B1ADDF000005	TRANSISTOR	
Q1062	B1ABCE000015	TRANSISTOR	
Q2101	B1ADDF000005	TRANSISTOR	
Q301	B1GFCFAA0004	TRANSISTOR	
Q302	B1GFCFAA0004	TRANSISTOR	
Q303	B1GFCFAA0004	TRANSISTOR	
Q304	B1ADDF000005	TRANSISTOR	
Q305	B1ADDF000005	TRANSISTOR	
Q306	B1ADDF000005	TRANSISTOR	
Q354	B1ADDF000005	TRANSISTOR	
Q360	B1ACAA000019	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q361	B1ACAA000019	TRANSISTOR	
Q362	B1ACAA000019	TRANSISTOR	
Q370	B1BAAL000016	TRANSISTOR	
Q371	B1BAAL000016	TRANSISTOR	
Q372	B1BAAL000016	TRANSISTOR	
Q501	2SC4212H	TRANSISTOR	
Q520	B1ADBM000004	TRANSISTOR	
Q551	2SC6073000LK	TRANSISTOR	
Q603	B1ABCE000015	TRANSISTOR	
Q604	B1ABCE000015	TRANSISTOR	
Q605	B1ABCE000015	TRANSISTOR	
Q608	B1ABCE000015	TRANSISTOR	
Q610	B1ADDF000005	TRANSISTOR	
Q850	B1BCCM000002	TRANSISTOR	
Q857	B1BAAN000037	TRANSISTOR	
Q870	B1ADDF000005	TRANSISTOR	
	RESISTORS		
R005	ERJ6GEYJ512	M 5.1KOHM,J,1/10W	
R006	ERJ6GEYJ473	M 47KOHM,J,1/10W	
R007	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	
R1004	ERJ6GEYJ470	M 47OHM,J,1/10W	
R1005	ERJ6GEYJ621	M 620OHM,J,1/10W	
R1006	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	
R1007	ERJ6GEYJ121	M 120OHM,J,1/10W	
R1008	ERJ6GEYJ152	M 1.5KOHM,J,1/10W	
R1021	ERJ6ENF2211	F 2.21KOHM, 1/10W	
R1022	ERJ6ENF3241	M3.24KOHM, 1/10W	
R1023	ERJ6ENF5111	F 5.11KOHM, 1/10W	
R1024	ERJ6ENF9091	M9.09KOHM, 1/10W	
R1025	ERJ6ENF2152	M21.5KOHM, 1/10W	
R1033	ERJ6ENF2321	F 2.32KOHM, 1/10W	
R1062	ERDS2TJ102	C 1KOHM,J, 1/4W	
R1105	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1106	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1108	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1109	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R1112	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1114	ERJ6GEYJ151	M 150OHM,J,1/10W	
R1115	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1131	ERJ6GEYJ220	M 22OHM,J,1/10W	
R1132	ERJ6GEYJ220	M 22OHM,J,1/10W	
R1140	ER0S2CKF1002	M 10KOHM,F, 1/4W	
R1142	ERJ6ENF1001	M 1KOHM, 1/10W	
R1150	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1201	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1202	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R1228	ERJ6GEYJ101	M 100OHM,J,1/10W	
R1229	ERJ6GEYJ101	M 100OHM,J,1/10W	
R2112	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R2114	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R2302	ERX2FJSR33E	C 0.33OHM,J, 2W	
R2317	ERJ6GEYJ622	M 6.2KOHM,J,1/10W	
R2318	D0AE1R0JA046	C 1OHM,J, 1/4W	
R2319	D0AE1R0JA046	C 1OHM,J, 1/4W	
R2321	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R2322	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R253	ERJ6GEYJ751	M 750OHM,J,1/10W	

[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name & Description	Remarks
R255	ERJ6GEYJ751	M 750OHM,J,1/10W	
R256	ERDS2TJ472	C 4.7KOHM,J, 1/4W	
R257	ERDS2TJ472	C 4.7KOHM,J, 1/4W	
R3002	ERJ6GEYJ750	M 75OHM, 1/10W	
R3004	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R3005	ERJ6GEYJ750	M 75OHM, 1/10W	
R3006	ERJ6GEYJ750	M 75OHM, 1/10W	
R3008	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R3009	ERJ6GEYJ750	M 75OHM, 1/10W	
R301	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R3010	ERJ6GEYJ750	M 75OHM, 1/10W	
R3011	ERJ6GEYJ750	M 75OHM, 1/10W	
R302	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R3022	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R3024	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R3026	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R303	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R304	ERJ6GEYJ240	F 24OHM,J,1/4W	
R305	ERJ6GEYJ240	F 24OHM,J,1/4W	
R306	ERJ6GEYJ240	F 24OHM,J,1/4W	
R310	D0AE181JA046	C 180OHM,J, 1/4W	
R3101	ERDS2TJ470	C 47OHM,J, 1/4W	
R3102	ERDS2TJ470	C 47OHM,J, 1/4W	
R3104	ERJ6GEY0R00	M 0OHM,J,1/10W	
R3105	ERJ6GEY0R00	M 0OHM,J,1/10W	
R311	D0AE181JA046	C 180OHM,J, 1/4W	
R312	D0AE181JA046	C 180OHM,J, 1/4W	
R3132	ERJ6GEYJ111	F 110OHM,J, 1/4W	
R3134	ERJ6GEYJ111	F 110OHM,J, 1/4W	
R3138	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R3139	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R317	ERJ6GEYJ151	M 150OHM,J,1/10W	
R318	ERJ6GEYJ151	M 150OHM,J,1/10W	
R319	ERJ6GEYJ151	M 150OHM,J,1/10W	
R363	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R364	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R365	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R366	ERC14GK152	S 1.5KOHM, 1/4W	
R367	ERC14GK152	S 1.5KOHM, 1/4W	
R368	ERC14GK152	S 1.5KOHM, 1/4W	
R369	ERJ6GEY0R00	M 0OHM,J,1/10W	
R373	ERJ6ENF1431	F 1.43KOHM, 1/8W	
R374	ER0S2CHF1431	M 1.43KOHM, 1/4W	
R375	ERJ6ENF1431	F 1.43KOHM, 1/8W	
R381	ERJ6GEYJ121	M 120OHM,J,1/10W	
R382	ER0S2CHF1000	M 100OHM,1/10W	
R383	ER0S2CHF1000	M 100OHM,1/10W	
R384	ER0S2CHF1000	M 100OHM,1/10W	
R385	ERJ6GEY0R00	M 0OHM,J,1/10W	
R391	ERG2FJ103H	M 10KOHM,J, 2W	
R392	ERJ6GEYJ101	M 100OHM,J,1/10W	
R393	D0AE301JA046	C 300OHM,J, 1/4W	
R394	ERG2FJ103H	M 10KOHM,J, 2W	
R395	ERDS2TJ101	C 100OHM,J, 1/4W	
R396	D0AE301JA046	C 300OHM,J, 1/4W	
R397	ERG2FJ103H	M 10KOHM,J, 2W	
R398	ERJ6GEYJ101	M 100OHM,J,1/10W	

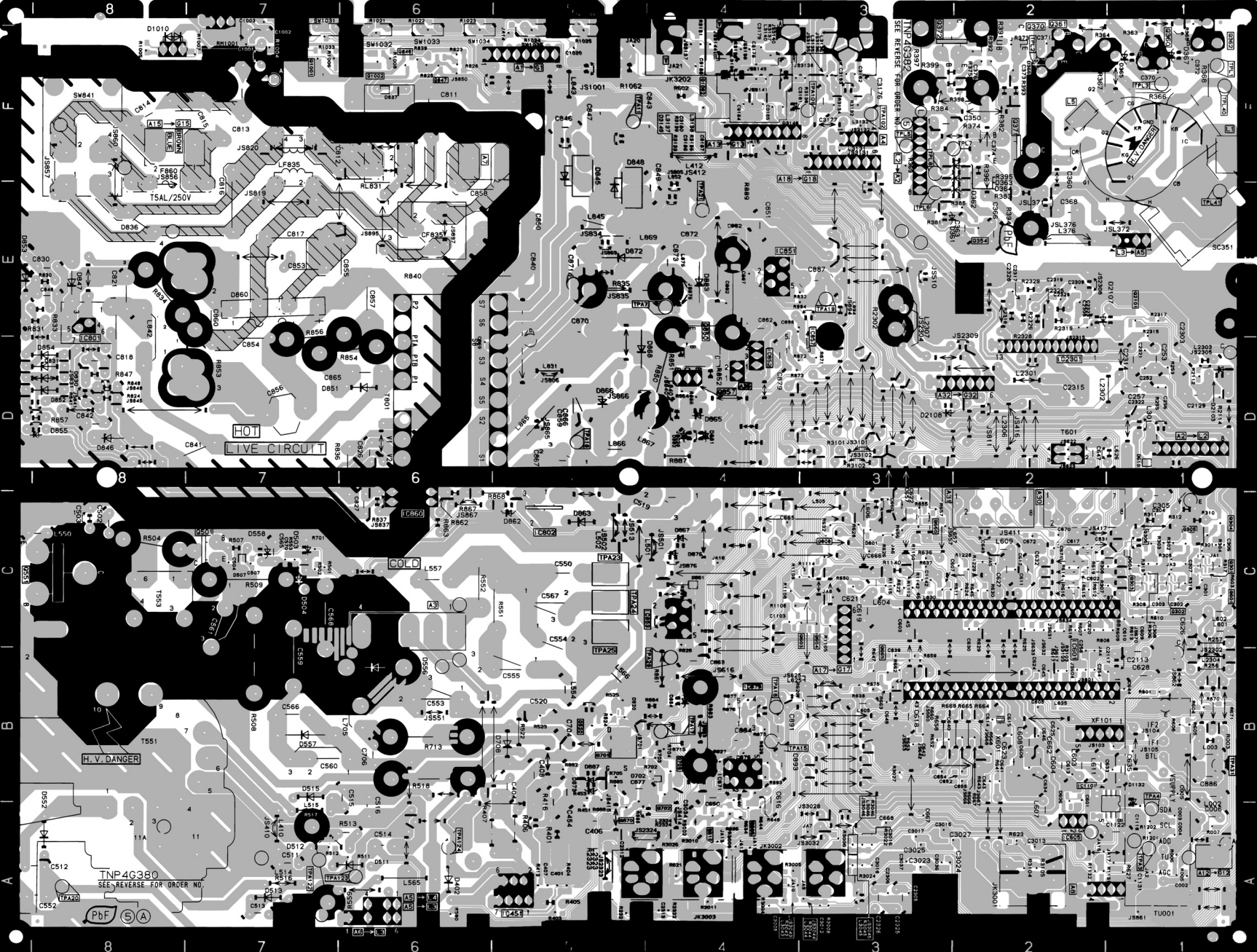
[illegible]	[illegible]	[illegible]	

Ref. No.	Part No.	Part Name & Description	Remarks
R399	D0AE301JA046	C 300OHM,J, 1/4W	
R401	ERDS2TJ104	C 100KOHM,J, 1/4W	
R403	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R404	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R405	ERDS2TJ563	C 56KOHM,J, 1/4W	
R406	ERDS1TJ1R5	C 1.5OHM,J, 1/2W	
R407	ERG1SJ221V	M 220OHM,J,1W	
R413	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R416	ERX1SJ1R2E	M 1.2OHM,J, 1W	
R451	ERJ6GEYJ223	M 22KOHM,J,1/10W	
R453	ERJ6GEYJ101	M 100OHM,J,1/10W	
R501	ERJ6GEYJ273	M 27KOHM,J,1/10W	
R502	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R504	ERG2SJS332H	M 10KOHM,J,1/10W	
R507	ERDS2TJ561	C 560OHM,J, 1/4W	
R508	ERG3FJ152H	M 1.5KOHM,J, 3W	
R509	ERG3FJ182H	M 1.8KOHM,J, 3W	
R511	ERJ6ENF1002	M 10KOHM, 1/10W	
R512	ERJ6ENF1152	M11.5KOHM, 1/10W	
R513	ERQ14AJ100E	F 10OHM,J, 1/4W	
R518	D0DK5R6JA019	W 5.6KOHM,J,10W	
R522	D0AE623JA046	C 62KOHM,J, 1/4W	
R523	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R524	ERJ6GEYJ104	M 100KOHM,J,1/10W	
R525	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R552	ERG1SJ102P	M 1KOHM,J, 1W	
R553	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R559	D0C12R7JA042	M 2.7OHM,J, 1W	
R580	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R601	ERJ6GEYJ470	M 47OHM,J,1/10W	
R602	ERDS2TJ103	C 10KOHM,J, 1/4W	
R604	ERJ6GEYJ470	M 47OHM,J,1/10W	
R605	ERJ6GEYJ470	M 47OHM,J,1/10W	
R606	ERJ6GEYJ752	M 7.5KOHM,J,1/10W	
R607	ERJ6GEYJ752	M 7.5KOHM,J,1/10W	
R608	ERJ6GEYJ470	M 47OHM,J,1/10W	
R609	ERJ6GEY0R00	M 0OHM,J,1/10W	
R611	ERJ6GEYJ101	M 100OHM,J,1/10W	
R614	ERJ6GEYJ221	M 220OHM,J,1/10W	
R615	ERJ6GEYJ122	M 1.2KOHM,J,1/10W	
R616	ERJ6GEYJ563	M 56KOHM,J,1/10W	
R618	ERJ6GEY0R00	M 0OHM,J,1/10W	
R619	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R620	ERJ6ENF1002	M 10KOHM, 1/10W	
R621	ERJ6ENF2002	M 20KOHM, 1/10W	
R624	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R625	ERJ6GEYJ102	M 1KOHM,J,1/10W	
R626	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R627	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R628	ERJ6GEYJ823	M 82KOHM,J,1/10W	
R629	ERJ6GEY0R00	M 0OHM,J,1/10W	
R632	ERJ6GEYJ682	M 6.8KOHM,J,1/10W	
R634	ERJ6GEYJ151	M 150OHM,J,1/10W	
R635	ERJ6GEYJ151	M 150OHM,J,1/10W	
R636	ERJ6GEYJ101	M 100OHM,J,1/10W	
R638	ERJ6GEY0R00	M 0OHM,J,1/10W	
R640	ERJ6GEYJ471	M 470OHM,J,1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R641	ERJ6GEY0R00	M 0OHM,J,1/10W	
R643	ERJ6GEY0R00	M 0OHM,J,1/10W	
R644	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R645	ERJ6GEYJ101	M 100OHM,J,1/10W	
R646	ERJ6GEYJ183	M 18KOHM,J,1/10W	
R647	ERJ6GEYJ750	M 75OHM, 1/10W	
R656	ERJ6GEYJ823	M 82KOHM,J,1/10W	
R658	ERDS2TJ470	C 47OHM,J, 1/4W	
R659	ERJ6GEYJ470	M 47OHM,J,1/10W	
R660	ERJ6GEYJ470	M 47OHM,J,1/10W	
R664	ERDS2T0T	C 0OHM, 1/4W	
R665	ERDS2T0T	C 0OHM, 1/4W	
R669	ERDS2T0T	C 0OHM, 1/4W	
R670	ERJ6GEYJ101	M 100OHM,J,1/10W	
R671	ERJ6GEYJ101	M 100OHM,J,1/10W	
R701	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R824	ERX12SJR27E	M 0.27OHM,J, 1/2W	
R827	ERJ6GEYJ153	M 15KOHM,J,1/10W	
R829	ERJ6ENF3092	F 30.9KOHM, 1/8W	
R830	ERDS2TJ221	C 220OHM,J, 1/4W	
R831	ERDS2TJ333	C 33KOHM,J, 1/4W	
R832	ERJ6ENF4022	F 40.KKOHM, 1/8W	
R833	ERDS2TJ102	C 1KOHM,J, 1/4W	
R834	ERG2FJ823H	M 82KOHM,J,2W	
R836	ERG1SJ220P	M 22OHM,J,1W	
R840	RCR100TAJ825	C 8.2MOHM,J, 1W	
R848	ERX12SJR33E	M 0.33OHM,J, 1/2W	
R850	ERG3SJS470H	M 47OHM,J, 1/2W	
R852	D0AE162JA046	C 1.6KOHM,J, 152W	
R853	D0D72R2KA002	W 2.2OHM,K, 7W	
R854	ERG2FJ470H	M 47OHM,J, 2W	
R856	ERG2SJS104H	M 100KOHM,J, 2W	
R857	ERDS2TJ102	C 1KOHM,J, 1/4W	
R861	ERG1SJ120P	M 12OHM,J, 1W	
R863	ERDS2TJ101	C 100OHM,J, 1/4W	
R864	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R866	ERJ6GEYJ392	M 3.9KOHM,J,1/10W	
R867	ERDS2TJ222	C 2.2KOHM,J, 1/4W	
R868	ERDS1TJ101	C 100OHM,J, 1/2W	
R871	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R872	ERJ6ENF1052	F 10.5KOHM, 1/10W	
R873	ERJ6ENF1802	M 18KOHM, 1/10W	
R875	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R876	ERJ6ENF1002	M 10KOHM, 1/10W	
R877	ERJ6ENF5101	F 5.1KOHM, 1/10W	
R882	ERJ6GEYJ332	M 3.3KOHM,J,1/10W	
R884	ERDS2TJ562	C 5.6KOHM,J, 1/4W	
R885	ERJ6GEYJ752	M 7.5KOHM,J,1/10W	
R886	ERJ6GEYJ433	M 43KOHM,J,1/10W	
R887	ERG1SJ273P	M 27KOHM,J, 1W	
R888	ERJ6GEYJ103	M 10KOHM,J,1/10W	
R889	ERX3FJ3R3H	M 3.3OHM,J, 3W	
R893	ERJ6ENF5102	M 51KOHM, 1/10W	
R894	ERJ6ENF1303	M 130KOHM, 1/10W	
	TRANSFORMERS		
T551	ZTFP12507A	FLYBACK TRANS	

Ref. No.	Part No.	Part Name & Description	Remarks
T553	ETH19Y210BZ	H DRIVE TRANS	
T801	ETS35AH1G6AC	SWITCHING TRANS	
	OTHERS		
A4	K1KA04AA0190	CONNECTOR	
A8	K1KA04AA0093	CONNECTOR	
CF835	TAP4GA0005	POSISTOR	
F860	K5D502BLA016	FUSE	
JA1	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA10	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA11	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA12	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA13	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA14	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA16	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA17	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA2	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA3	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA4	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA5	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA6	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA7	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA8	ERJ6GEY0R00	M 0OHM,J,1/10W	
JA9	ERJ6GEY0R00	M 0OHM,J,1/10W	
JK3002	K4BK10B00003	REAR AV TERMINAL	
JK3003	K4BK10B00004	REAR AV TERMINAL	
JK3202	K4BC14B00005	FRONT AV TERMINAL	
JS104	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS105	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS2315	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3043	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3044	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3045	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3046	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3131	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3132	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3135	ERJ6GEYJ111	FIXED RESISTOR	
JS3136	ERJ6GEYJ111	FIXED RESISTOR	
JS3137	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3139	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS3140	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS631	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS632	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS633	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS634	ERJ6GEY0R00	M 0OHM,J,1/10W	
JS670	ERJ6GEY0R00	M 0OHM,J,1/10W	
LF835	ELF21V012S	LINE FILTER	
RM1001	B3RAD0000120	REMOCON RECEIVER	
SC351	K3B09CA00014	CRT SOCKET	
SW1031	EVQ11G05R	SWITCH	
SW1032	EVQ11G05R	SWITCH	
SW1033	EVQ11G05R	SWITCH	
SW1034	EVQ11G05R	SWITCH	
SW1035	EVQ11G05R	SWITCH	
SW1036	EVQ11G05R	SWITCH	
SW841	ESB92DA1B	SWITCH	

Ref. No.	Part No.	Part Name & Description	Remarks
TU001	ENV59K15G3F	TUNER	
X601	H0D202500007	CRYSTAL OSC	
XF101	J0C3525A0002	DELAY LINE	


HOT
LIVE CIRCUIT
COLD
H.V.DANGER
T5AL/250V
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PbF
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SW1034
SW1032
SW841
RM1001
D1010
T551
T601
T5AL/250V
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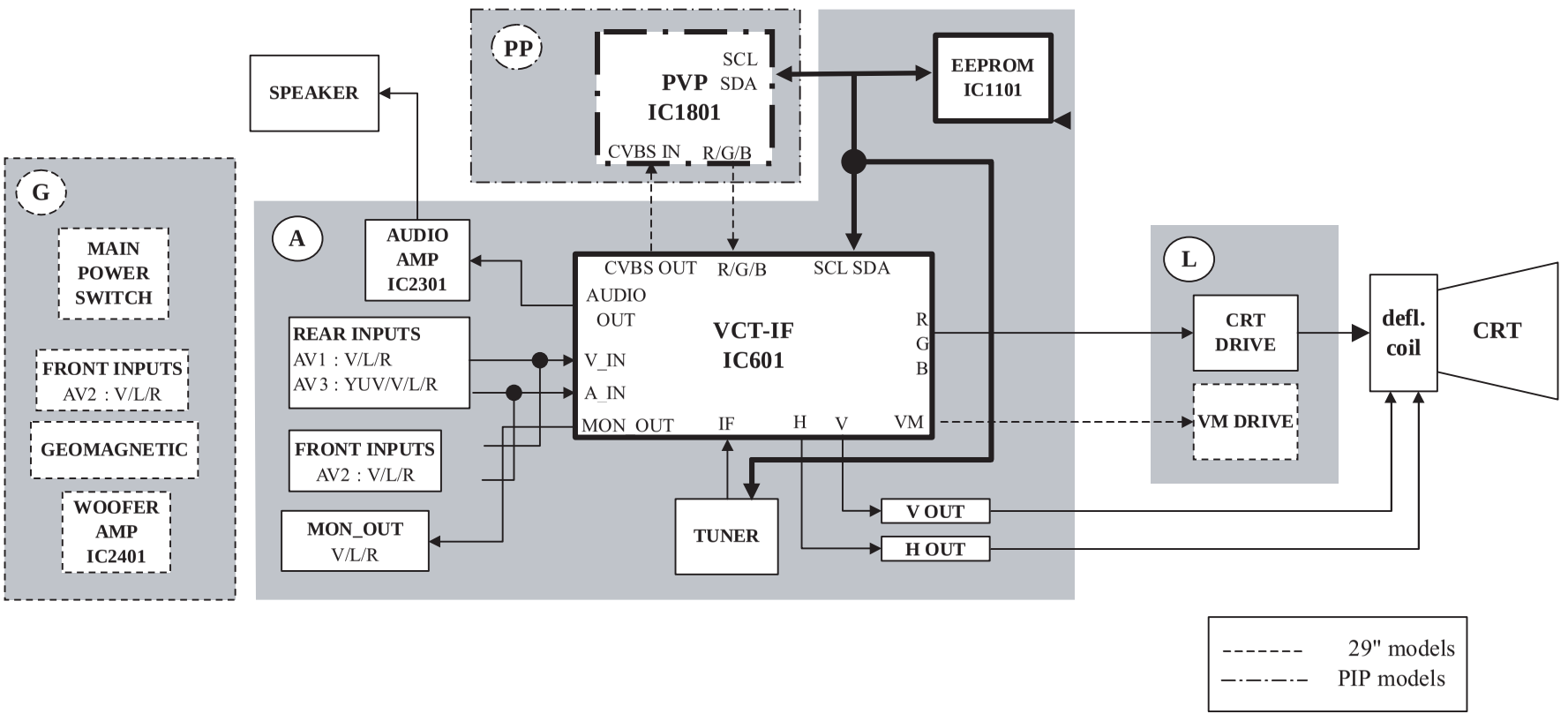
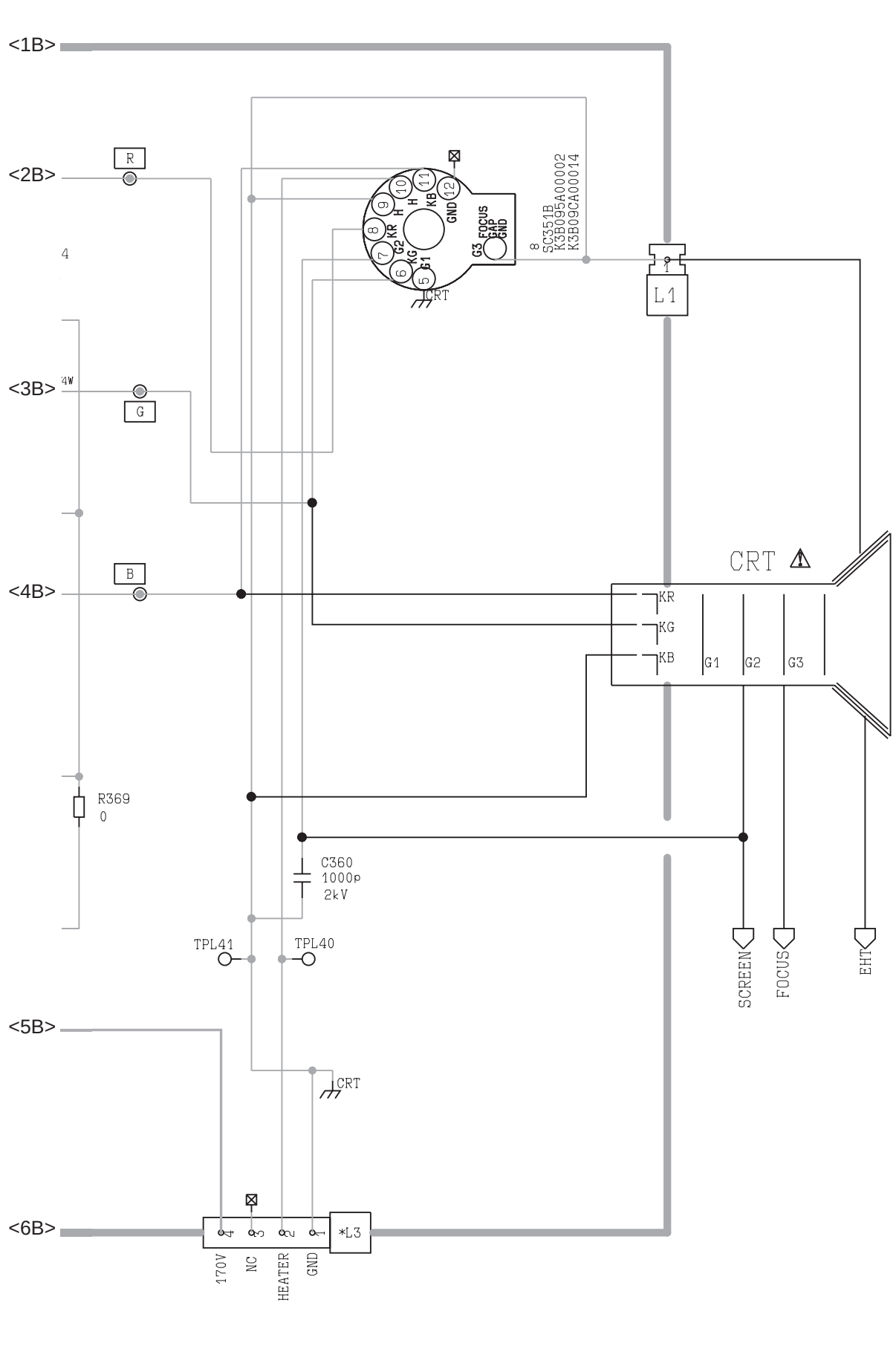
SEE REVERSE FOR ORDER NO.
H.V.DANGER
TU001
XF101
SC351

GP41 CHASSIS BLOCK DIAGRAM

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G2
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GND
FOCUS
GAP
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R369
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EHT
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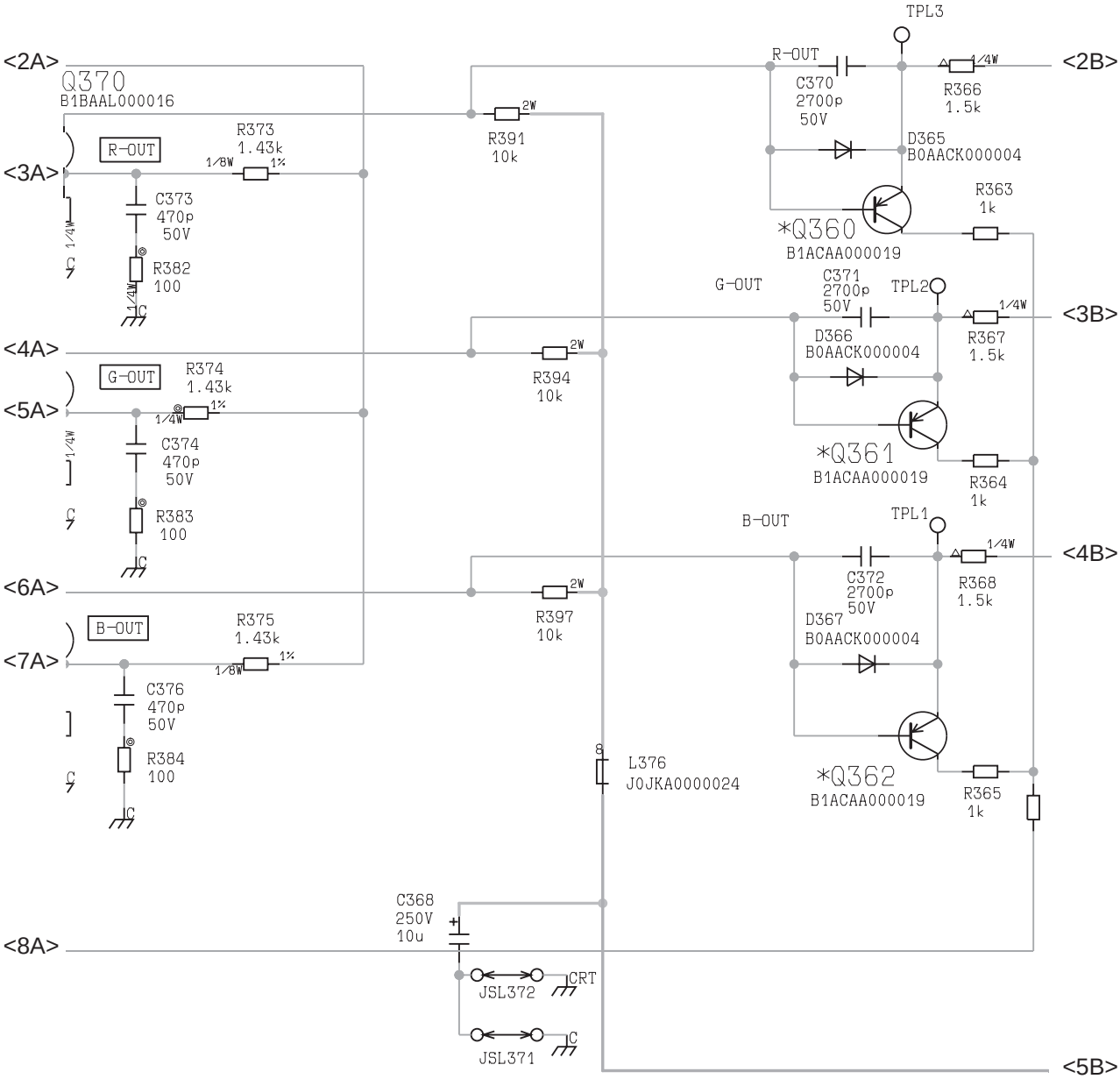
170V
NC
HEATER
GND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R391
10k
2W
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R-OUT
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1/4W
R366
1.5k
D365
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1k
G-OUT
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TPL2
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R367
1.5k
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1k
G-OUT
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1.43k
C374
470p
50V
R383
100
R394
10k
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2700p
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R368
1.5k
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1.43k
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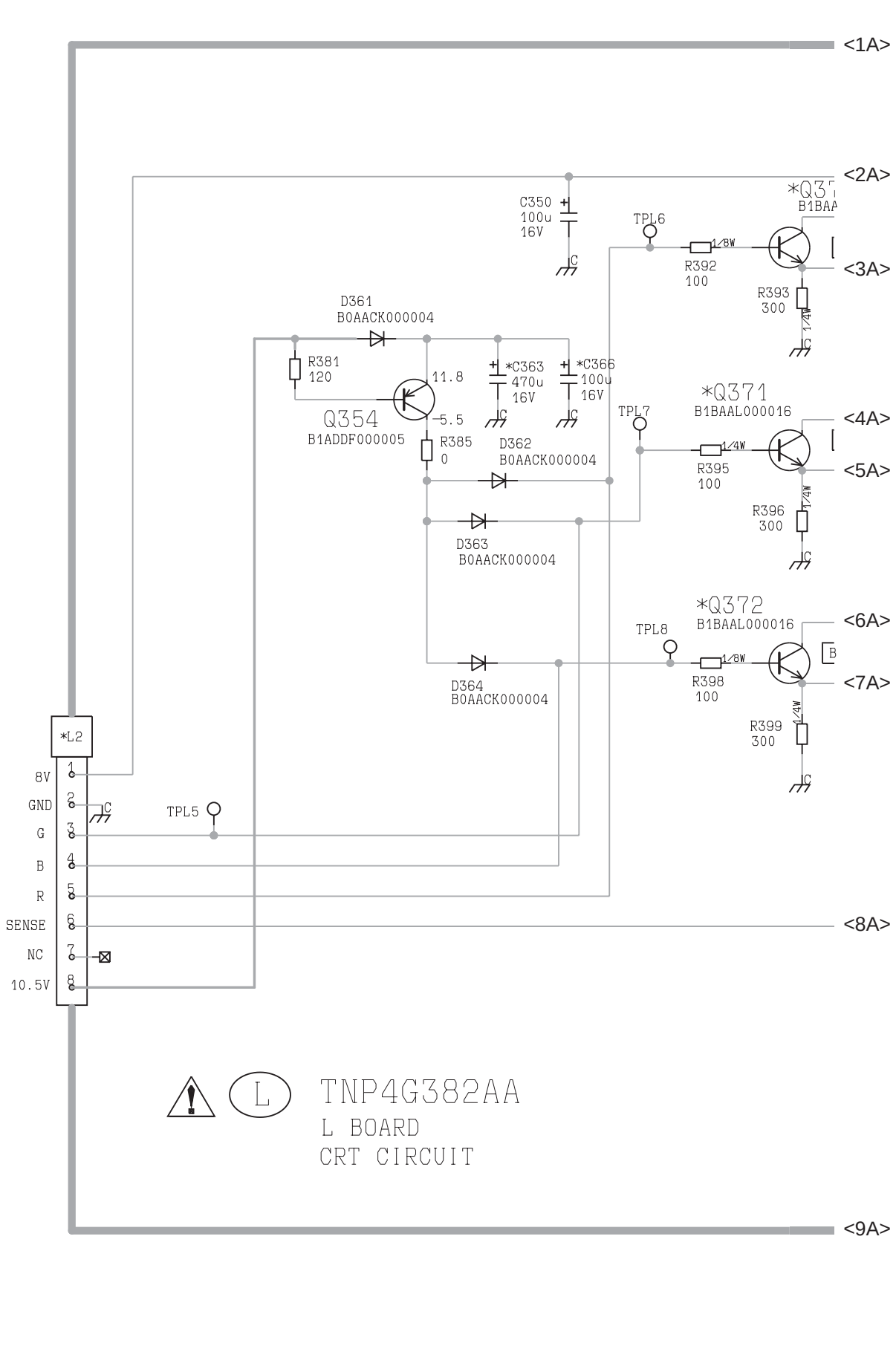
CRT
JSL371
C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R393
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1/4W
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*C363
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16V
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100u
16V
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R395
100
1/4W
R396
300
1/4W
D363
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TPL8
R398
100
1/8W
R399
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1/4W
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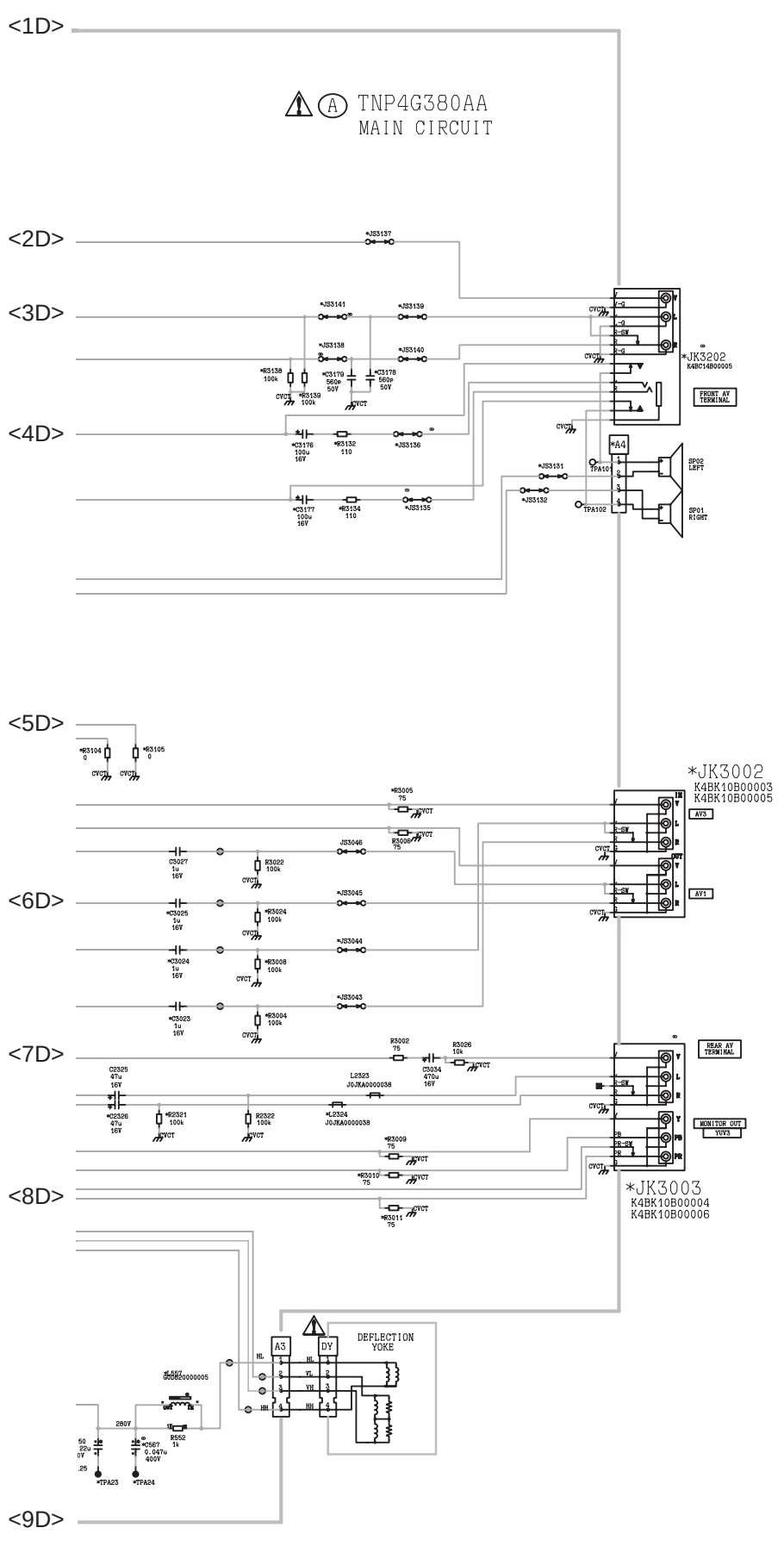
L BOARD
CRT CIRCUIT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CVCT
*JK3202
K4BC14B00005
FRONT AV TERMINAL
*C3176 100u 16V
*R3132 110
*JS3136
*C3177 100u 16V
*R3134 110
*JS3135
*A4
*JS3131
*JS3132
TPA101
TPA102
SP02 LEFT
SP01 RIGHT
*R3104 0
*R3105 0
*JK3002
K4BK10B00003
K4BK10B00005
*R3005 75
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JS3046
C3027 1u 16V
R3022 100k
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C3025 1u 16V
*R3024 100k
*JS3044
C3024 1u 16V
*R3008 100k
*JS3043
C3023 1u 16V
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AV3
AV1
R3002 75
R3026 10k
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C2325 47u 16V
*C2326 47u 16V
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R2322 100k
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*L2324 J0JKA0000038
*R3009 75
*R3010 75
*R3011 75
REAR AV TERMINAL
MONITOR OUT
YOVS
*JK3003
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A3
DY
DEFLECTION YOKE
HL
VL
VH
HH
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50 22u 0V
25
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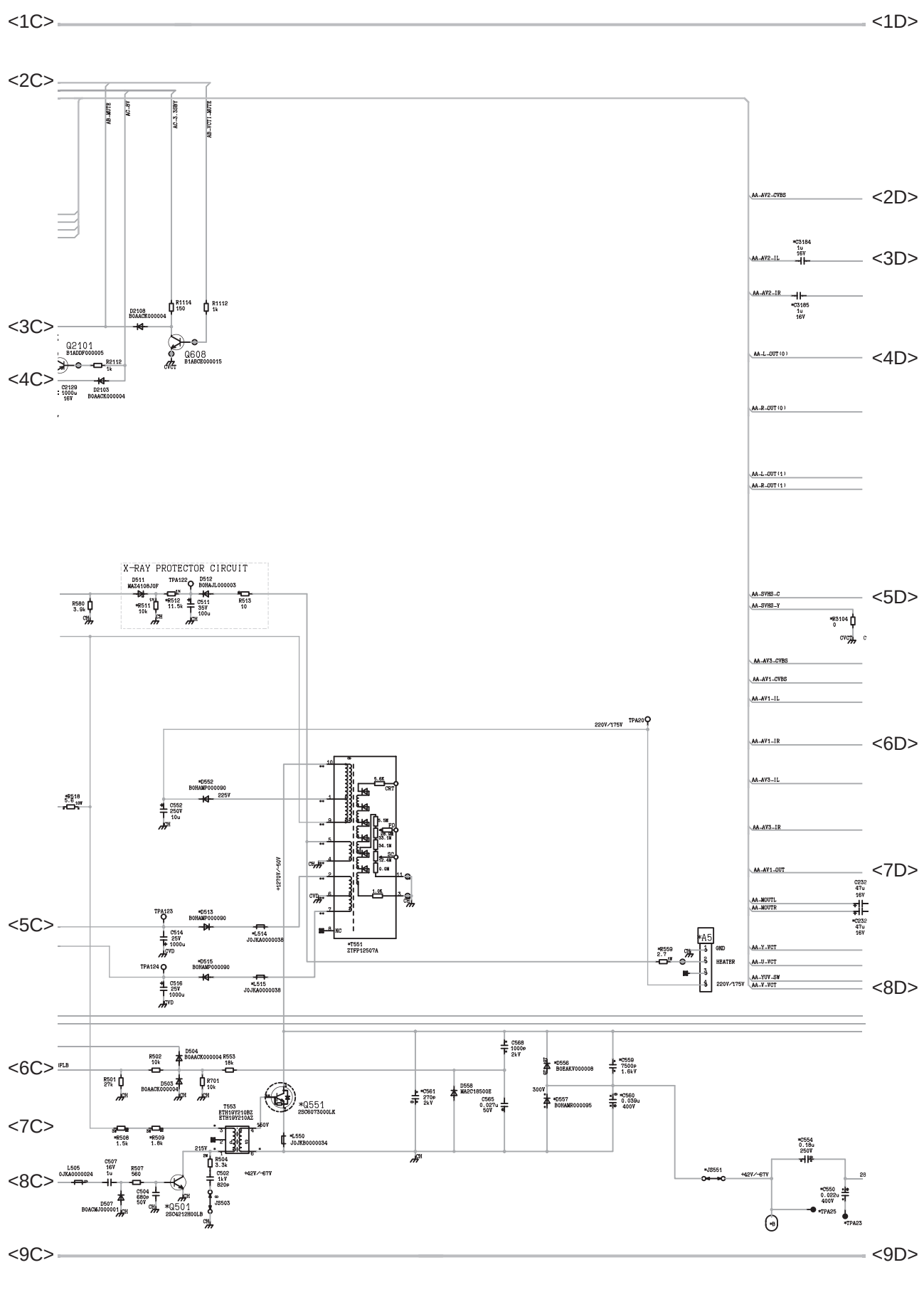
*TPA24


X-RAY PROTECTOR CIRCUIT
AA-AV2-CVBS
AA-AV2-IL
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AA-L-OUT(0)
AA-R-OUT(0)
AA-L-OUT(1)
AA-R-OUT(1)
AA-SVHS-C
AA-SVHS-Y
AA-AV3-CVBS
AA-AV1-CVBS
AA-AV1-IL
AA-AV1-IR
AA-AV3-IL
AA-AV3-IR
AA-AV1-OUT
AA-MOUTL
AA-MOUTR
AA-Y-VCT
AA-U-VCT
AA-YUV-SW
AA-V-VCT
220V/175V
+42V/-67V
+12V/-50V
GND
HEATER
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Q608
*Q501
*Q551
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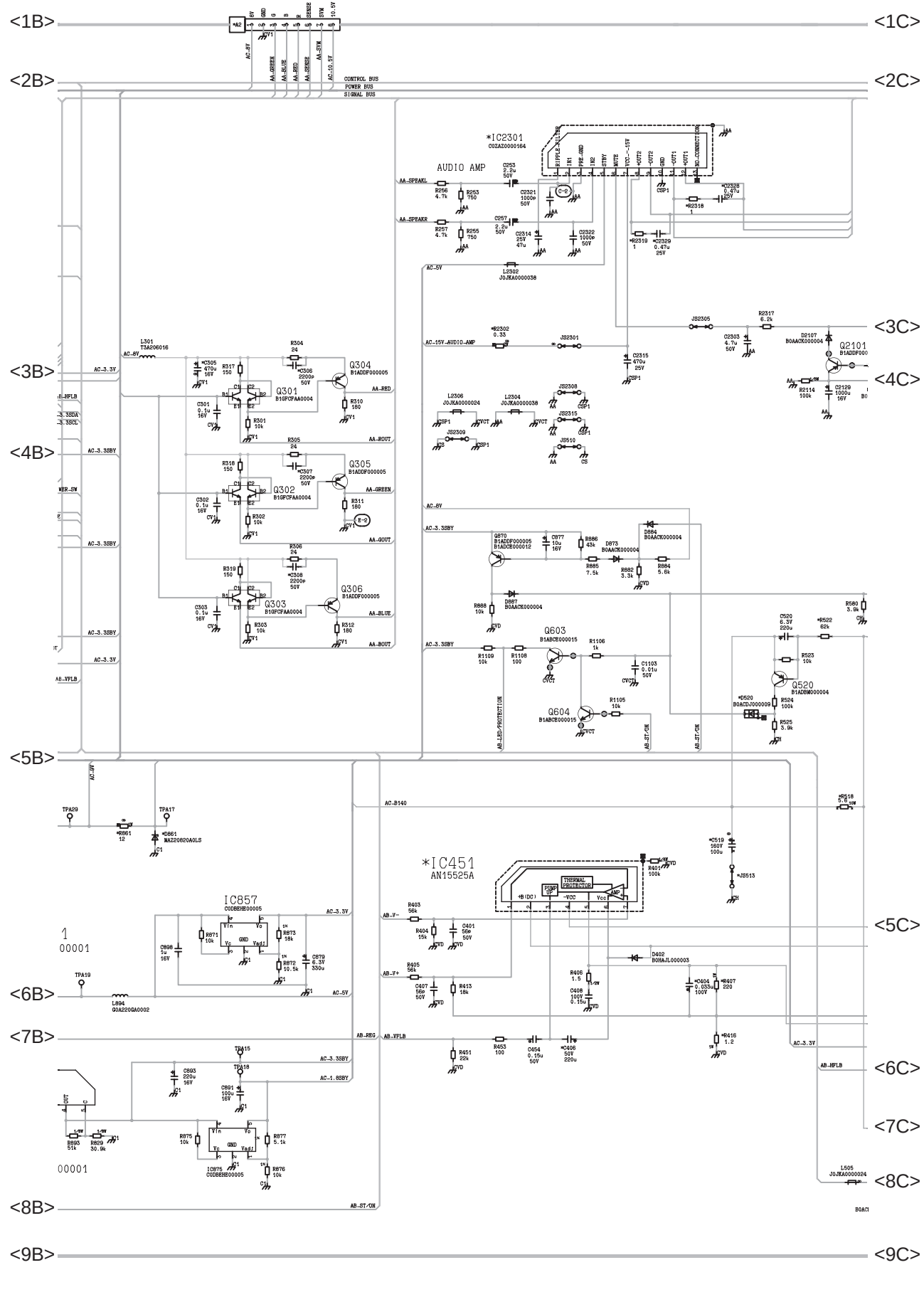
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SIGNAL BUS
AUDIO AMP
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Q603
Q604
Q520
*IC451
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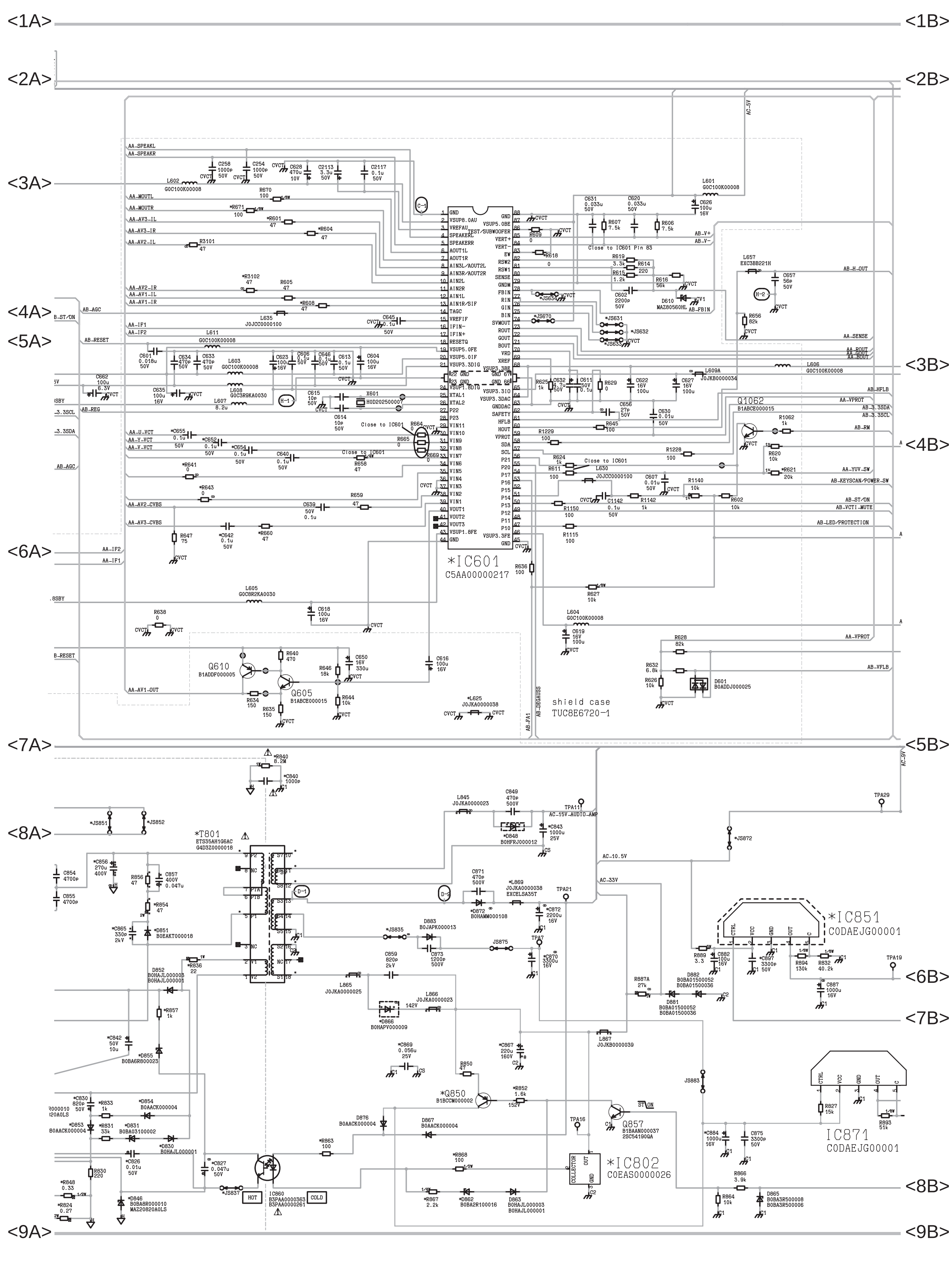
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AA-SPEAKR
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AA-MOUTL
AA-MOUTR
*R671 100
AA-AV3-IL
*R601 47
AA-AV3-IR
*R604 47
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*R3102 47
R605 47
AA-AV2-IR
AA-AV1-IL
AA-AV1-IR
*R608 47
AB-AGC
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AA-IF1
AA-IF2
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AB-RESET
C601 0.018u 50V
C634 470p 50V
C633 470p 50V
L603 G0C100K00008
C623 100u 16V
C606 0.1u 50V
C646 0.1u 50V
C613 0.1u 50V
C604 100u 16V
C662 100u 6.3V
C635 100u 16V
L608 G0C3R9KA0030
L607 8.2u
C615 10p 50V
X601 H0D20250007
C614 10p 50V
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AA-U-VCT
AA-Y-VCT
AA-V-VCT
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*C654 0.1u 50V
C640 0.1u 50V
Close to IC601
R664 0
R665 0
R669 0
R658 47
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R659 47
AA-AV2-CVBS
C639 50V 0.1u
AA-AV3-CVBS
*C642 0.1u 50V
*R660 47
R647 75
CVCT
1 GND
2 VSUP8.0AU
3 VREFAU
4 SPEAKERL
5 SPEAKERR
6 AOUT1L
7 AOUT1R
8 AIN3L/AOUT2L
9 AIN3R/AOUT2R
10 AIN2L
11 AIN2R
12 AIN1L
13 AIN1R/SIF
14 TAGC
15 VREFIF
16 IFIN-
17 IFIN+
18 RESETQ
19 VSUP5.0FE
20 VSUP5.0IF
21 VSUP3.3DIG
22 GND
23 GND
24 VSUP1.8DIG
25 XTAL1
26 XTAL2
27 P22
28 P23
29 VIN11
30 VIN10
31 VIN9
32 VIN8
33 VIN7
34 VIN6
35 VIN5
36 VIN4
37 VIN3
38 VIN2
39 VIN1
40 VOUT1
41 VOUT2
42 VOUT3
43 VSUP1.8FE
44 GND
88 GND
87 VSUP5.0BE
86 TEST/SUBWOOFER
85 VERT+
84 VERT-
83 EW
82 RSW2
81 RSW1
80 SENSE
79 GNDM
78 FBIN
77 RIN
76 GIN
75 BIN
74 SVMOUT
73 ROUT
72 GOUT
71 BOUT
70 VRD
69 XREF
68 VSUP3.3BE
67 GND
66 GND
65 VSUP3.3IO
64 VSUP3.3DAC
63 GNDDAC
62 SAFETY
61 HFLB
60 HOUT
59 VPROT
58 SDA
57 SCL
56 P21
55 P20
54 P17
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52 P15
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50 P13
49 P12
48 P11
47 P10
46 VSUP3.3FE
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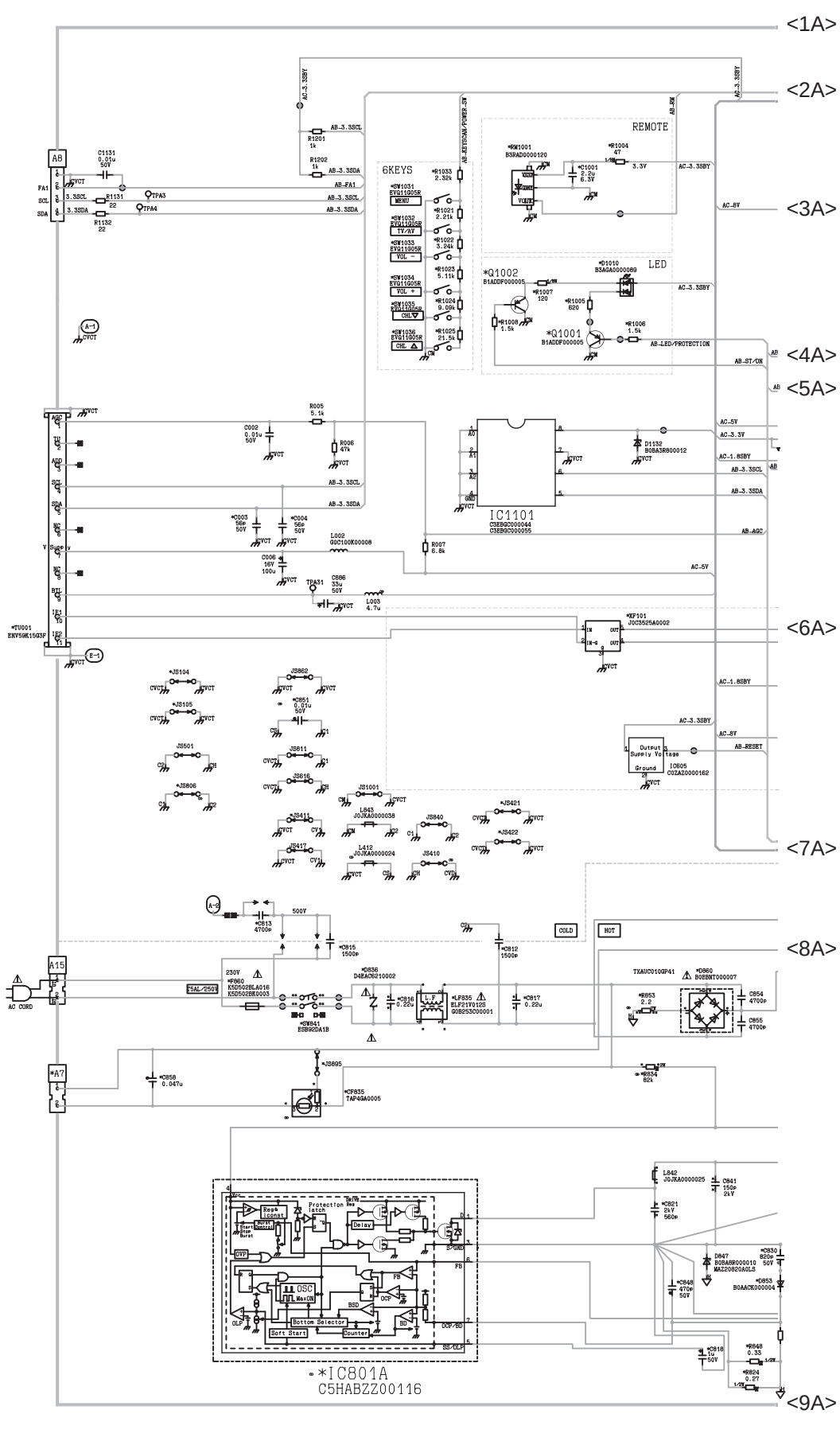
C5AA00000217
C-1
H-1
H-2
L601 G0C100K00008
C631 0.033u 50V
C620 0.033u 50V
C626 100u 16V
R607 7.5k
R606 7.5k
R609 0
*R618 0
AB-V+
AB-V-
Close to IC601 Pin 83
R619 3.3k
R614 220
R615 1.2k
R616 56k
C602 2200p 50V
D610 MAZ80560HL
CV1
AB-FBIN
*JS634
*JS670
*JS631
*JS632
*JS633
L657 EXC3BB221H
C657 56p 50V
AB-H-OUT
R656 82k
AA-SENSE
AA-ROUT
AA-GOUT
AA-BOUT
L606 G0C100K00008
L609A J0JKB0000034
R625 1k
C632 4.7u 50V
C611 50V 0.1u
R629 0
C622 16V 100u
C627 16V 100u
C656 27p 50V
C630 0.01u 50V
R645 100
AB-HFLB
AA-VPROT
AB-3.3SDA
AB-3.3SCL
Q1062
B1ABCE000015
R1062 1k
AB-RM
R1229 100
R1228 100
R620 10k
*R621 20k
AA-YUV-SW
R624 1k
R611 100
L630 J0JCC0000100
C607 0.01u 50V
R1140 10k
AB-KEYSCAN/POWER-SW
C1142 0.1u 50V
R1142 1k
R602 10k
R1150 100
AB-ST/ON
AB-VCTI-MUTE
R1115 100
AB-LED/PROTECTION
R636 100
R627 10k
L605 G0C8R2KA0030
C618 100u 16V
R638 0
L604 G0C100K00008
C619 16V 100u
R628 82k
R632 6.8k
R626 10k
D601 B0ADDJ000025
AB-VFLB
Q610 B1ADDF000005
R640 470
C650 16V 330u
R646 18k
Q605 B1ABCE000015
R644 10k
R634 150
R635 150
AA-AV1-OUT
C616 100u 16V
*L625 J0JKA0000038
AB-FA1
AB-DEGAUSS
shield case
TUC8E6720-1
*R840 8.2M
*C840 1000p
*JS851
*JS852
*T801
ETS35AH1G6AC
G4D3Z0000018
C854 4700p
C855 4700p
*C856 270u 400V
R856 47
C857 400V 0.047u
*R854 47
*C865 330p 2kV
*D851 B0EAKT000018
*R836 22
D852 B0HAJL000003 B0HAJL000001
*R857 1k
*C842 50V 10u
*D855 B0BA6R800023
D-1
D-2
L845 J0JKA0000023
C849 470p 500V
*D848 B0HFRJ000012
*C843 1000u 25V
TPA11
AC-15V-AUDIO-AMP
AC-10.5V
AC-33V
AC-9V
TPA29
*JS872
C871 470p 500V
*L869 J0JKA0000038 EXCELSA35T
TPA21
*D872 B0HAMM000108
*C872 2200u 16V
D883 B0JAPK000013
*JS835
C873 1200p 500V
JS875
TPA7
*C870 3300u 16V
C859 820p 2kV
L865 J0JKA0000025
L866 J0JKA0000023
142V
*D866 B0HAPV000009
*C869 0.056u 25V
*C867 220u 160V
L867 J0JKB0000039
R850 47
*Q850 B1BCCM000002
*R852 1.6k
152V
Q857 B1BAAN000037 2SC54190QA
ST ON
TPA16
*IC802
C0EAS0000026
COLLECTOR
OUT
GND
JS883
*IC851
C0DAEJG00001
CTRL
VCC
GND
OUT
C
R889 3.3
C882 100u 16V
*C897 3300p 50V
R894 130k
R832 40.2k
TPA19
C887 1000u 16V
R887A 27k
D882 B0BA01500052 B0BA01500036
D881 B0BA01500052 B0BA01500036
IC871
C0DAEJG00001
R827 15k
R893 51k
*C884 1000u 16V
C875 3300p 50V
R866 3.9k
R864 10k
D865 B0BA3R500008 B0BA3R500006
*C830 820p 50V
*R833 1k
*D854 B0AACK000004
*D853 B0AACK000004
*R831 33k
*D831 B0BA03100002
*D830 B0HAJL000001
*C826 0.01u 50V
R830 220
*C827 0.047u 50V
*R848 0.33
*R824 0.27
*D846 B0BA8R000010 MAZ20820A0LS
*JS837
HOT
COLD
IC860
B3PAA0000363
B3PAA0000261
D876 B0AACK000004
D867 B0AACK000004
*R863 100
*R868 100
*R867 2.2k
*D862 B0BA2R100016
D863 B0HAJL000003 B0HAJL000001


6KEYS
REMOTE
LED
IC1101
CSEB3C000044
CSEB6C000055
IC801A
C5HABZZ00116
IC605
C02AZ0000162
Output
Supply Voltage
Ground
Protection latch
Regulator
Start-up Control
Soft Start Blanking Burst
Delay
OVP
OSC
Max ON
Bottom Selector
Soft Start
Counter
BSD
OCP
SD
S/GND
FB
OCP/BD
SS/OLP
OLP
AC CORD
75AL/250V
230V
500V
COLD
HOT
TXAUC0100P41
A8
A15
A7
A-1
A-2
A-3
A-4
B-1
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